

FACE INVESTIGATION

SUBJECT: FARMER DIES WHEN PINNED BETWEEN ARM AND FRAME OF A SKID STEER LOADER

SUMMARY

On August 14, 2002, a 73 year-old dairy farmer (victim) was pinned between the bucket arm of a skid steer loader and the machine frame. He was changing a fork attachment to the bucket on the loader while standing in front of the loader, lowering the arms without being seated in the cab area. From birth he had been blind in one eye and lost some vision in the other eye about four months before the incident. Nine months before the incident, he lost strength in his left arm and leg. While his arm and leg had improved, at the time of the incident he was clumsier than he had been and had decreased physical skills and strength. He had lost a significant amount of weight in the months preceding the incident, but the interlock bars on the skid steer loader remained loose from the time when he had a larger girth. His wife was concerned when he didn't return to the house as expected, and when she found him she immediately went to the house to call EMS. The first responders began resuscitation and he was pronounced dead at a nearby hospital.



Figure 1. View of Skidsteer Loader from Operator's Manual

FACE investigators concluded that, to help prevent similar occurrences, farmers and employers should:

- **Remain seated in the operator's compartment while operating the loader.**
- **Operate the loader with the seat belt fastened and restraint bars down in place.**
- **Seek and use the services of organizations and agencies that provide technical assistance and/or adaptive equipment to agricultural workers with disabling conditions.**

Additionally, farm safety resources should:

- **Use agricultural news media programs, publications and community gatherings as opportunities to distribute information about working safely with skid steer loaders.**

INTRODUCTION

On August 14, 2002, a 73 year-old dairy farmer (victim) was pinned between the arm of the skid steer loader and the machine frame. On August 17, 2002, Wisconsin FACE investigators learned about the incident via the newspaper. The death certificate was reviewed and subsequently the sheriff's report and the coroner's report were reviewed. An investigation was initiated. On June 13, 2003 the FACE Director and the Field

Investigator conducted a visit to the farm where the incident occurred. The victim's wife reviewed the incident and demonstrated the operation of the skid steer loader.

The victim had been engaged in farming his entire life. He enjoyed farming and was liked by everyone, helping neighbors when they needed him. He knew how to fix and repair machines and worked on the loader shortly before he died. He raised 150-200 chickens and rabbits, and had a cash crop of peas and also raised sweet corn on this dairy farm. He learned to operate farm machines through on the job experience. The farm family owned the skid steer loader that was used for a variety of tasks on the farm.

The victim bought the Case Model 1825 skid steer loader new approximately 15 years ago. The skid loader did not have an interlock on it to prevent it from being lowered when the operator was not seated inside the cab area. The victim had been observed operating the bucket from outside the cab on previous occasions. He was aware of the practice for safety operation of the loader attachments from the manufacturers and dealers information.

INVESTIGATION

The victim used the skid loader almost every day for a variety of tasks on the farm. On the day of the incident, he was in the process of removing the fork from the loader and replacing it with the bucket. The victim came into the house and told his wife what he planned to do. He left and when he didn't return within his usual time, she left the house and went to check on him. She found him in the area where he had been working on the skid loader, with his head and left arm pinned between the arm of the skid loader and the machine. He was in a kneeling position in front of the skid loader that was still running. The safety bars were not in place. A neighbor notified EMS and the victim was pronounced dead upon arrival at a nearby hospital.

CAUSE OF DEATH

The cause of death was determined to be due to crushing head injuries as a consequence of being pinned between the arms and body of the skid steer loader.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Farmers and other skid steer loader operators should remain seated in the operator's compartment while operating the loader.

Discussion: Skid steer loaders are designed and manufactured to be operated from the operator's cab. Safety devices such as safety bars, seat belts, metal cage sides and rollover protection structures (ROPS) are all intended to protect the operator from injury while seated in the cab. In this case, the victim exited the cab and operated the hydraulic arm controls from the outside. The bucket came down and pinned the victim against the frame. The incident would have been prevented if he had remained in the loader cab.

Recommendation #2: Farmers and other skid steer loader operators should operate the loader with the seat belt fastened and restraint bars down in place.

Discussion: Seat belts and interlocked restraint bars are intended to protect skid steer loader operators from serious injury caused by jolts, overturns and being pinned by the equipment. The victim in this incident defeated the restraint bar system by exiting the cab and was able to operate the hydraulic arm.

Recommendation #3: Farmers and farm workers with functional limitations caused by illness or injury should seek and use the services of organizations and agencies that provide technical assistance and/or adaptive equipment to agricultural workers with disabling conditions.

Discussion: Farm machinery, including skid steer loaders, is designed and manufactured for use by individuals with full functional capacity. Physically disabling conditions such as illness or injury can impair a farm worker's ability to operate a machine safely when carrying out his or her work duties. Technical assistance in designing and fitting adaptive equipment is available from agricultural safety specialists including agricultural engineers, state vocational rehabilitation counselors, agricultural equipment and supply manufacturers, and Extension programs that serve people with physical disabilities.

Recommendation #4: Use agricultural news media programs, publications and community gatherings as opportunities to distribute information about working safely with skid steer loaders.

Discussion: Farmers incorporate new methods and machines, such as skid steer loaders, into their work sites to reduce manual labor effort and increase production. Reliable farm safety information is available from expert resources, such as extension agents, university agricultural engineering departments, farm insurance agents and occupational safety research groups to assist farmers in safely adapting the new technology to their unique needs. The information must be repeated and offered through multiple channels to reach the full- intended audience. The reports of farm safety focus groups reveal farmers' interest in the details of injury-causing incidents in their state, as well as timely information about preventing similar incidents on their farm. They are more likely to heed the information if a financial incentive is also attached. Information from a variety of sources must give a consistent message.